Date: Tuesday, 12/5/2006 8:16:30 AM
User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	**Drawing Name**	: STEM
Job Number	: 29791A		
Estimate Number	: 10394		
P.O. Number	: N/A	**Part Number**	: D29681
This Issue	: 12/5/2006 **S.O. No.** : N/A	**Drawing Number**	: D2968
Prsht Rev.	: NC	**Project Number**	: N/A
First Issue	: N/A **Type** : MACHINED PARTS	**Drawing Revision**	: B1
Previous Run	: 28697	**Material**	: N/A
Written By	:	**Due Date**	: 12/23/2006 **Qty:** 46 **Um:** Each
Checked & Approved By	: 06 12 05		
Comment	: Est:C 03.04.11 Reformat; Incorporated D2968-1/-5 KJ/RF		

Additional Product

Job Number:

Seq. #:	Machine Or Operation:	Description :
1.0	M4130NR0750	4130 steel rod .750"

Comment: Qty.: 0.4550 f(s)/Unit Total : 27.2979 f(s)
Material: AISI 4130 Ø 3/4 " Bar
(M4130N-R0.750) Batch: M100559 M102443
Identify AS D2968-1
DF 06/12/07

2.0	HARDINGE	HARDINGE CNC LATHE SMALL

Comment: HARDINGE CNC LATHE SMALL
1-Turn Blank as per Folio FA047 and Dwg D2968
2-Deburr, no sharp edges
DF 06/12/07

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE

Comment: INSPECT PARTS AS THEY COME OFF MACHINE
J.G DF 06/12/07

4.0	HAAS1	HAAS CNC VERTICAL MACHINING #1

Comment: HAAS CNC VERTICAL MACHINING #1
1- Machine as per Folio FA047 and Dwg D2968
2- Deburr
J.F. 06/12/13

5.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE

Comment: INSPECT PARTS AS THEY COME OFF MACHINE
J.F. 06/12/13

Form: rprocess

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes (No) **DQA:** ☐ **Date:** 06/12/14

QA: N/C Closed: ____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Date: Tuesday, 12/5/2006 8:16:30 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services **Drawing Name:** STEM

Job Number: 29791A **Part Number:** D29681

Job Number:

Seq. #:	Machine Or Operation:	Description :
6.0	QC8	SECOND CHECK

Comment: SECOND CHECK SA 06.12.13

7.0	PACKAGING 1	PACKAGING RESOURCE #1

Comment: PACKAGING RESOURCE #1
Identify and Stock
Location: ST 396 LB 06/12/14 (46)

8.0	QC21	FINAL INSPECTION/W/O RELEASE

(46)

Comment: FINAL INSPECTION/W/O RELEASE LD 06/12/14

Job Completion

LA 06.12.14

Form: rprocess

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

QA: N/C Closed: _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	29791A
Description: Stem	Part Number:	D2968-1
Inspection Dwg: D2968 Rev: B1		Page 1 of 1

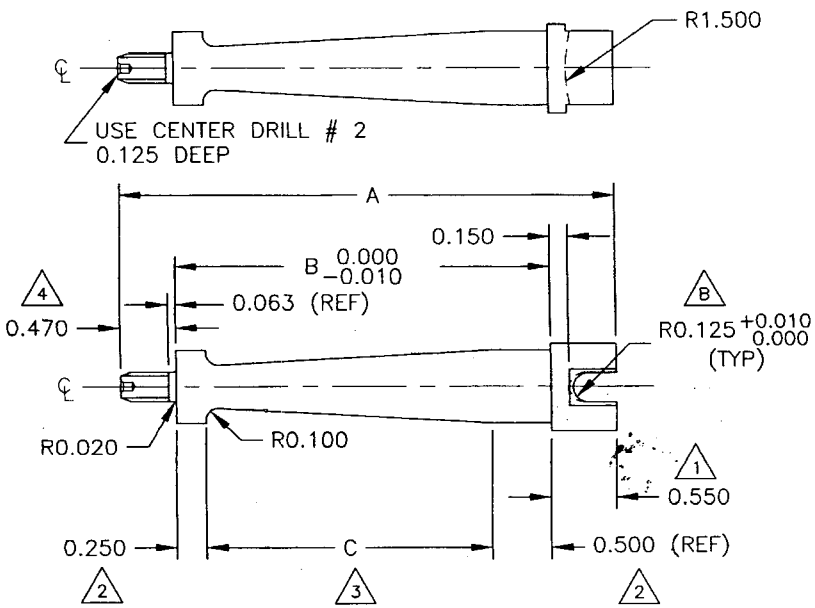
FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
5.040	+/-0.010	5.045	✓			
4.020	+0.000/-0.010	4.020	✓			
3.270	+/-0.010	3.270	✓			
0.470	+/-0.010	.464	✓			
0.250	+/-0.010	.245	✓			
0.550	+/-0.010	.545	✓			
Ø0.750	+/-0.010	.748	✓			
Ø0.625	+/-0.010	.624	✓			
Ø0.363	+/-0.010	.364	✓			
0.250	+0.010/-0.000	.255	✓			
0.625	+/-0.010	.624	✓			
0.150	+/-0.010	.149"	✓			
0.250	+0.010/-0.000	.253"	✓			
0.625	+/-0.010	.628"	✓			
0.150	+/-0.010	.150"	✓			
1/4-28 Major dia	0.243 - 0.249	.245	✓			
MOW	0.261 – 0.267	.266"	✓			

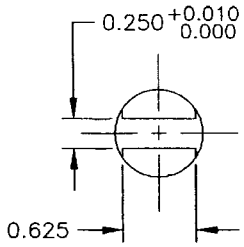
Measured by:	J.F/J.G/J.F	Audited by:	SA	Prototype Approval:	N/A
Date:	06/12/06	Date:	06.12.13	Date:	N/A

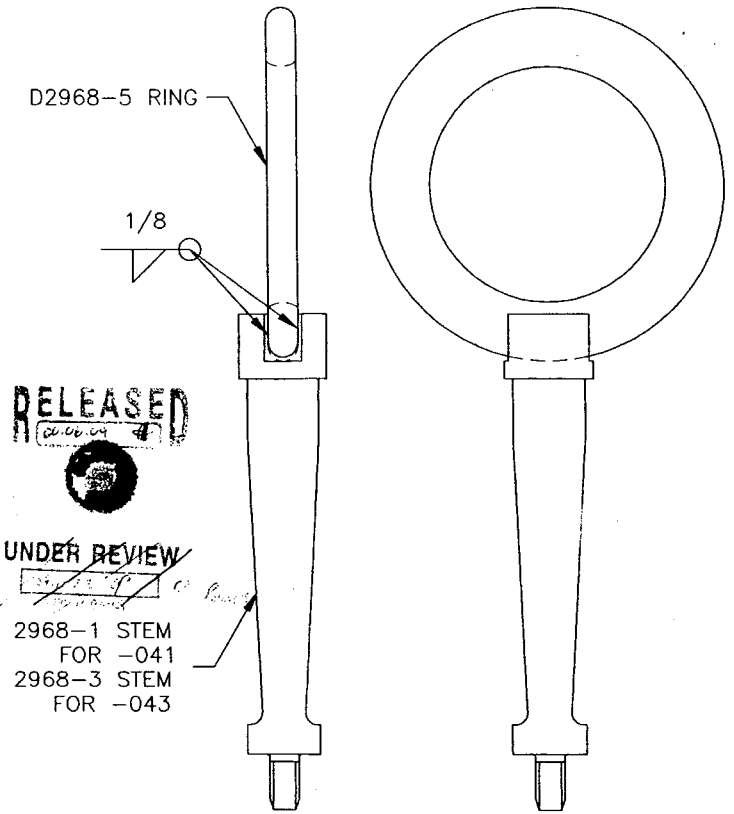
Rev	Date	Change	Revised by	Approved
A	04.02.25	New Issue P/O D2968-041	KJ/RF	
B	05.05.26	Dimensions added	KJ/JLM	



PART NUMBER	A	B	C
D2968−1	5.040	4.020	3.270
D2968−3	4.200	3.180	2.430

D2968−1/−3 STEM





RELEASED

UNDER REVIEW

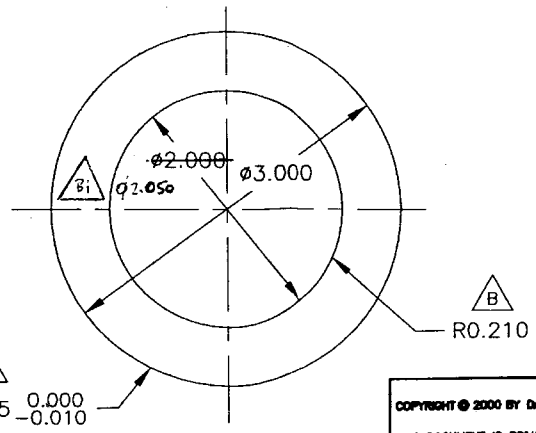
D2968−1 AND D2968−3 STEM:

MATERIAL: AISI 4130
1. ø0.750 O.D.
2. ø0.625 O.D.
3. MACHINE UNIFORM TAPER FROM ø0.363 O.D. TO ø0.625 O.D.
4. 1/4−28 UNF THREAD WITH 0.063 GRIP

MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS UNLESS OTHERWISE INDICATED
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

D2968−5 RING:

MATERIAL AISI 4130
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



D2968−5 RING

D2968−041 AND D2968−043 TOW RING:

WELD PER QSI 004 ON ALL EDGES BETWEEN STEM AND RING
HEAT TREAT TO MIN ULTIMATE TENSILE STRENGTH OF 125 KSI
FINISH: CAD PLATE ENTIRE ASSEMBLY PER
QQ−P−416F CLASS I TYPE II
POWDER COAT WHITE (REF 4.3.5.2) PER DART
QSI 005 4.3 (EXCEPT THREADS)
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

B	00.05.31	R0.125 AND R0.210 WERE 0.060 x 45°
A	00.03.07	NEW ISSUE

DESIGN	DRAWN BY	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D2968	REV. B
DATE 00.05.31		TITLE TOW RING	SCALE 1:1
			SHEET 1 OF 1

B | 04.02.06 | 2.00D WAS 2.000

SHOP COPY
RETURN TO ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT WITHOUT NOTICE
WORK ORDER NO. 29791A